ABSTRACT OF THE DISCLOSURE

Aged deterioration of ferromagnetic construction materials is nondestructively evaluated by applying to an evaluating material a magnetic field whose magnetic field amplitude is rather low, distinguishing various lattice defects, and quantifying them separately. A method includes obtaining a stress-strain relation in advance by a tensile test, evaluating a minor hysteresis loop (reference minor loop) while applying an applied stress (σ) thereto, obtaining correlation between physical quantities for evaluating aged deterioration, obtaining a subject minor hysteresis loop (subject minor loop) by a tensile test, obtaining measured values of the physical quantities from the loop, and evaluating aged deterioration of the evaluating material from the measured values.